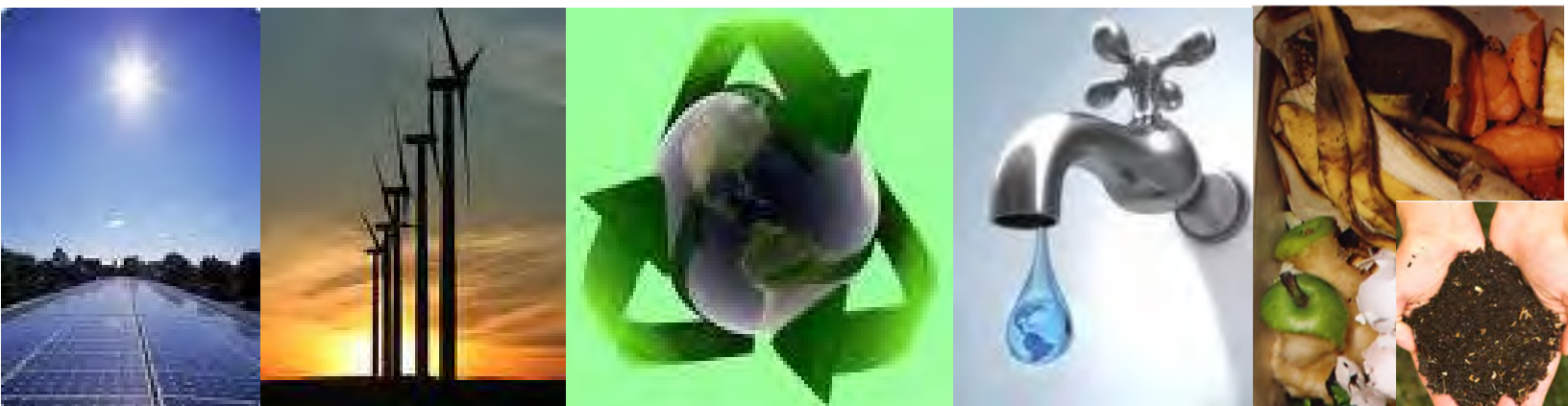




**New York Mets - CitiField**  
**Environmental Assessment:**  
**MOU Annual Report**  
**March 28, 2013**



**Environmental Protection Agency**  
**Region 2**

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## Accomplishments

**Reductions of 46,517 MTCO<sub>2</sub>e**



## Memorandum of Understanding

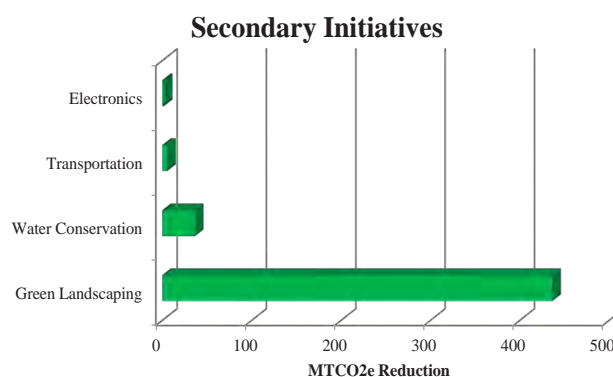
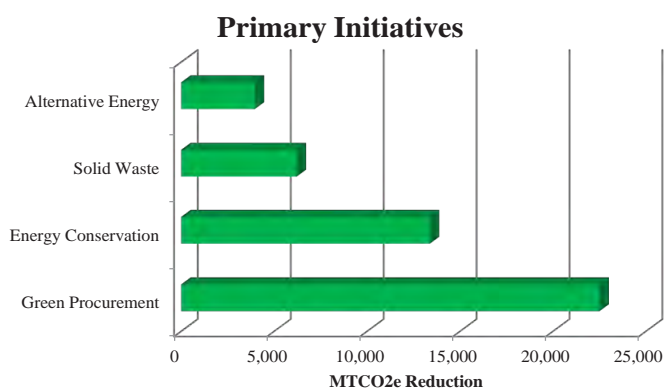
On March 13, 2008, the New York Mets signed a Memorandum of Understanding (MOU) for the construction and operation of CitiField, pledging to become an environmental steward by implementing a number of green initiatives that would reduce its carbon footprint and further improve our planet's environment. This partnership with the United States Environmental Protection Agency (EPA) and the New York Mets - CitiField Stadium has resulted in reducing energy, water and solid waste production across their entire operations.

## Reduction in Environmental Footprint

In the last five years, the New York Mets and CitiField Stadium have provided five updates documenting their green initiatives. The EPA has analyzed the submitted information and generated an environmental footprint for the organization. Due to their progressive green efforts, the organization has managed to reduce its carbon footprint by 46,517 MTCO<sub>2</sub>e\* and saved an estimated \$3.8 million in operating expenses.

\*Metric Ton Carbon Dioxide Equivalent

Environmental Metrics	Total Sector (MTCO <sub>2</sub> e)	Cost Savings (est.)
Energy Conservation	13,371.9	\$3,182,993
Alternative Energy	3,955.5	(\$1,205)
Water Conservation	36.6	\$45,718
Solid Waste	6,209.1	\$69,007
Green Procurement	22,500.0	\$500,000
Green Landscaping	436.7	\$1,991
Electronics Re-use / Recycling	2.0	\$31
Transportation	5.8	\$3,157
<b>Total (MTCO<sub>2</sub>e)</b>	<b>46,517.6</b>	<b>\$3,801,692</b>



## Measurement and Continuous Improvements

EPA uses these environmental conversion models to calculate metric tons of carbon dioxide equivalents:

Greenhouse Gas Equivalencies (GHG) Calculator converts GHG reductions into scenarios that can be easily communicated to the public.

eGRID Version 1.1 (2007) and the EPA Pollution Prevention (P2) GHG Conversion Tool which convert standard metrics for electricity, green energy, fuel use, chemical use, water use, and sustainable materials management into MTCO<sub>2</sub>e.

The EPA WARM Model which helps calculate GHG emission reductions from several different waste management practices, including source reduction, recycling, combustion, composting and landfilling.

The EPA Pollution Prevention (P2) Cost Calculator that estimates cost savings associated with GHG reductions.

Certain environmental data points cannot be converted to MTCO<sub>2</sub>e because scientific models do not currently exist.

As methodologies improve, environmental assessments will be updated to include any new GHG reduction estimates.

## Accomplishments

Reductions of 46,517 MTCO<sub>2</sub>e

## Greenhouse Gas Equivalencies

What does the reduction of 46,517 MTCO<sub>2</sub>e represent ?

The organization's effort is equivalent to any one of the following:

- Annual greenhouse gas emissions from 9,691 vehicles



- Carbon dioxide emissions from 5,214,978 gallons of gasoline



- Carbon dioxide emissions from 108,180 barrels of oil consumed



- Carbon dioxide emissions from the energy use of 2,394 homes for one year



- Carbon dioxide emissions from 1,938,233 propane tanks used for home barbecues



- Carbon dioxide emissions from gasoline carried by 614 tanker trucks



- Carbon dioxide emissions from burning 200 railcars' worth of coal (over 3 miles long)





Environmental Metrics	Mar 2008 MOU	March 2009 Update	March 2010 Update	March 2011 Update	March 2012 Update	March 2013 Update	Total Conversion (MTCO <sub>2e</sub> )	Cost Savings (est.)
<b>Energy Conservation/Energy Star</b>								
<b>Total Savings (MTCO<sub>2e</sub>)</b>			2,633.7	3,583.8	3,611.2	3,543.2	13,371.9	\$3,182,993
Miscellaneous Energy Conservation			4,338,501 kwh	5,903,579 kwh	5,948,752 kwh	5,836,800 kwh	13,371.9	\$3,182,993
Web Based Energy Competition								
Motors and Transformers								
Lighting Project Fixtures (bulbs and ballast)								
High Temp Hot Water Pipe Replacement								
HVAC, Chiller & Electrical								
Bulb Replacement - CFLs								
Bulb Replacement - LEDs								
Gas Savings								
Fuel Oil Savings								
<b>Alternative Energy</b>								
<b>Total Savings (MTCO<sub>2e</sub>)</b>				1,248.9	1,694.3	1,012.3	3,955.5	(\$1,205)
On-Site Solar								
On-Site Wind								
On-Site Geothermal								
On-Site Combined Heat and Power								
Purchase of Green Energy/Green Power				2,057,280 kwh	2,791,071 kwh	1,667,520 kwh	3,955.5	(\$1,205)
<b>Water Conservation/WaterSense</b>								
<b>Total Savings (MTCO<sub>2e</sub>)</b>			9.2	9.7	9.0	8.5	36.6	\$45,718
Miscellaneous Water Conservation								
Low Flow/Hands Free Faucets			463,000 gal	489,185 gal	454,559 gal	428,616 gal	3.9	\$4,613
Low Flow Toilets			314,000 gal	331,059 gal	307,626 gal	290,069 gal	2.5	\$3,124
Low Flow Shower Heads								
Low Flow Urinals								
Waterless Urinals			3,800,000 gal	4,031,587 gal	3,746,215 gal	3,532,415 gal	30.3	\$37,981
<b>Solid Waste Recycling</b>								
<b>Total Savings (MTCO<sub>2e</sub>)</b>			1,337.3	2,757.5	697.8	1,416.6	6,209.1	\$69,007
Mixed Recyclables (includes Wastewise)			236 tons	209 tons	171 tons	137.28 tons	2,161.9	\$30,131
Pallets Waste Avoided/Wood Recycled								
Steel Recycled Offsite during Deconstruction								
Concrete / Asphalt Recycled during Deconstruction								
Drywall								
Recycled C&D Waste (construction waste)								
Cardboard (construction/non-construction/sharp containers)								
Mixed Metal (construction/non-construction)				236 tons			1,274.4	\$9,440
Mixed Paper						164.1 tons	576.0	
Mixed Plastic (bottles,construction/non-construction,sharp containers)								
Blue Wrap								
Mixed Organics								
Food Donation (Waste diversion)								



Environmental Metrics	Mar 2008 MOU	March 2009 Update	March 2010 Update	March 2011 Update	March 2012 Update	March 2013 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Biosolids and Food Waste Recycling / Composting						28.62 tons	5.7	\$1,145
Fluorescent Bulbs				1100 bulbs (700 lb)		967 lbs	0.1	\$33
Ceiling Tiles Recycled								
Carpet Recycled								
Waste Oil Recycled			55,000 gal	73,600 gal	17,250 gal	16,091 gal	1,943.3	\$27,530
Magazines / Third Class Mail								
Newspapers								
Office Paper								
Textbooks								
Phonebooks								
Dimensional Lumber								
Fly Ash								
Aluminum Cans						18.2 tons	247.7	\$728
Glass								
HDPE / LDPE / PET								
Appliances								
Non-Ferrous Metals								
Fats, Oils, Grease								
Copper Wire								
Tires								
<b>Green Procurement</b>								
<b>Total Savings (MTCO2e)</b>	<b>22,500.0</b>						<b>22,500.0</b>	<b>\$500,000</b>
Purchase of Materials with Recycled Content								
Purchase / Use of Compost Socks								
Purchase of EPEAT Products								
Use of Recycled Steel during Construction	12,500 tons						22,500.0	\$500,000
Use of Recycled Iron during Construction								
Use of Recycled Plastic during Construction								
Use of Recycled Aluminium during Construction								
Use of Recycled Concrete / Asphalt during Construction								
Use of Coal Combustion Products								
<b>Green Landscaping</b>								
<b>Total Savings (MTCO2e)</b>		<b>45.9</b>	<b>45.9</b>	<b>114.9</b>	<b>114.9</b>	<b>114.9</b>	<b>436.7</b>	<b>\$1,991</b>
Green Roofs		11,000 sf	11,000 sf	11,000 sf	11,000 sf	11,000 sf	119.9	
Porous Pavement		65,000 sf	65,000 sf	65,000 sf	65,000 sf	65,000 sf	9.8	
Grass		25,000 sf	25,000 sf	25,000 sf	25,000 sf	25,000 sf	100.0	
Low / No Mow Area								
Green Space								
Re-use of Collected Stormwater								
On-Site Use of Compost / Mulch								
Moisture Sensing Sprinklers								
Number / Acres of Trees				890 (4 acres)	890 (4 acres)	890 (4 acres)	205.4	
Reflective Roof								
Synthetic Turf				9,000 sf	9,000 sf	9,000 sf	1.6	\$1,991



Environmental Metrics	Mar 2008 MOU	March 2009 Update	March 2010 Update	March 2011 Update	March 2012 Update	March 2013 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Native Plants								
<b>Electronics/EPEAT</b>								
<b>Total Savings (MTCO2e)</b>				2.0			2.0	\$31
Recycling of Electronics				15 TVs, 15 Printers (app. 1000 lb)			0.8	\$20
Re-Use/Donation of Used Computers				25 (app. 500 lb)			0.6	\$10
Toner/Ink Recycling and Use of Recycled Ink				15 cartridges (app. 60 lb)			0.6	\$1
Battery Recycling				200				
<b>Mass Transit</b>								
<b>Total Savings (MTCO2e)</b>								
Vehicles Miles Traveled								
<b>Transportation</b>								
<b>Total Savings (MTCO2e)</b>				1.9	1.9	1.9	5.8	\$3,157
Hybrid Vehicles				1	1	1	5.8	\$3,157
Electric Vehicles								
Biodiesel Vehicles								
Clean Construction Vehicles								
LNG Vehicles								
Smartway Transporters								
Bike Racks				10	10	10		
<b>LEED Projects</b>								
<b>Total Savings (MTCO2e)</b>								
Silver - 10%								
Gold - 17%								
Platinum - 20%								
<b>Misc. - Further Clarification</b>								
<b>Total Savings (MTCO2e)</b>								
NOX (equipment only)								
NOX (includes vehicles)								
<b>MTCO2e Savings</b>								
<b>Total (MTCO2e)</b>	22,500.0	45.9	4,026.1	7,718.7	6,129.2	6,097.5	46,517.6	\$3,801,692
Energy Conservation	0.0	0.0	2,633.7	3,583.8	3,611.2	3,543.2	13,371.9	\$3,182,993
Alternative Energy	0.0	0.0	0.0	1,248.9	1,694.3	1,012.3	3,955.5	(\$1,205)
Water Conservation	0.0	0.0	9.2	9.7	9.0	8.5	36.6	\$45,718
Solid Waste Recycling	0.0	0.0	1,337.3	2,757.5	697.8	1,416.6	6,209.1	\$69,007
Green Procurement	22,500.0	0.0	0.0	0.0	0.0	0.0	22,500.0	\$500,000
Green Landscaping	0.0	45.9	45.9	114.9	114.9	114.9	436.7	\$1,991
Electronics	0.0	0.0	0.0	2.0	0.0	0.0	2.0	\$31
Transportation	0.0	0.0	0.0	1.9	1.9	1.9	5.8	\$3,157



2013

## **New York Mets - CitiField Additional Green MOU Accomplishments and Cost Savings**

### **Enhancing Sustainability Efforts at Citi Field**

The new efforts described below complement the existing programs geared to make Citi Field an environmentally friendly venue. The ballpark was built with recycled concrete and construction vehicles were fueled with ultra-low sulfur diesel.

#### ***Food Waste***

The Mets, in partnership with Action Carting Environmental Services and ARAMARK, are composting food waste in all kitchens, suites, clubs and restaurants. Grass clippings from the field are also being composted.

In addition, new recycling receptacles are located throughout Citi Field, helping the Mets achieve an equal number of recycling containers to trash bins. Cans, plastic or glass bottles and cardboard will continue to be recycled. Beer cans are no longer being poured into cups to reduce waste.

#### ***Green Procurement***

The Mets and ARAMARK are purchasing green products including compostable utensils and post-consumer recycled cups, plates, and napkins.

#### ***Recycling of Used Oil and Grease***

Oil is being recycled in all concession stands, kitchens, clubs and restaurants. The waste oil is converted into biodiesel fuel and then reused in biodiesel-ready field equipment.

#### ***Green Cleaning Products***

Alliance Building Services now use green cleaning materials in its efforts to keep Citi Field clean.

The Mets save more than four million gallons of water per year by using 414 hands-free faucets, 635 automated toilet flush-valves, and 270 waterless urinals.

An 11,000 square foot green roof atop the administration building in right field, white PVC roofs throughout the ballpark, high mast parking lot light fixtures, permeable pavers, and an underground well used to irrigate the playing field are other ways the Mets are working at Citi Field to protect the environment.